THE OPEN UNIVERSITY OF SRI LANKA

B.Sc./B.Ed. DEGREE PROGRAMME - 2008/2009

BOTANY – LEVEL 04

BTU 2201/BTE 4201 – PLANT PHYSIOLOGY

ASSESSMENT TEST II - (NO BOOK TEST)

DURATION : ONE (01) HOUR



Registration No. DATE: 28 th March 2009 TIME: 4.00 p.m. – 5.00 p.m.					
DAI	E: 28	Waren 2009			
ANS	WER <u>A</u>	LL QUESTIONS IN THE SPACE PROVIDED. the blanks with the most appropriate word/words.			
01.	Fill ir	the blanks with the most appropriate word/words.			
	(a)	Some RNA in the nucleus can be enzymes and these are called			
	(b)	Concentration of substrate which requires to cause half the maximal reaction rate is named as			
	(c)	Non competitive inhibitors differ from competitive inhibitors that they do not compete with the for,			
	(d)	Hydrolases catalyze the addition of molecules to a particular substrate and bring about decomposition of the substrate into smaller, simpler units.			
	(e)	Enzymes that catalyze reactions in which molecules are joined together are called			
	(f)	Interior of the chloroplast is filled with a gel-like, enzyme-rich material called the			
	(g)	Accessory pigments protect chlorophyll from			
	(h)	Light reactions of photosynthesis take place in the			
	(i)	Synthesis of ATP from the transport of electrons excited by light energy			
		down an electron transport chain is called			
	(j)	During light reactions of photosynthesis, energy is			
•		absorbed by photosynthetic pigments, converted to			
		energy and stored in high energy compounds and			

(I) PEP fixes CO ₂ to form 4C compounds or	ts.	O ₂ acceptor in C ₃ plant	e initial Co	is th	(k)	
(m) In CAM plants, initial CO ₂ fixation and the C ₃ cycle are separated in C ₄ plants the two processes are separated in C ₄ plants the two processes are separated. (n) Arrangement of cells in C ₄ leaves is referred anatomy. (2) (a) What is respiration? (b) Give Four (04) differences between photosynthesis and respiration. (b) Photosynthesis Respiration i. ii. iii. iv. (c) Name the process by which a 6-cardon sugar is converted to pyrus (d) Where in the cell does this process occur? (e) Why is ATP used in this process? (f) Distinguish between substrate-level phosphorylation and cophosphorylation.		, "			(1)	
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	(g)	What is meant by 'respiratory quotient'?
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•	(h)	What is the significance of R.Q. value?
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02	(a)	What is biological nitrogen fixation?
03.	(a)	What is biological indogen manager.
	(b)	What is the importance of having heterocysts in N ₂ fixing cyanobacteria?
	(c)	Briefly describe how nodulation of legumes by Rhizobium takes place.
		and the language modules?
	(d)	What is the role of leghemoglobin, a pigment found in legume nodules?
		······································
	(e)	Name three organisms which are capable of fixing atmospheric nitrogen
		through a symbiotic association.
		(i)
		(ii)
		(iii)

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